

Group Memory
Bridge Construction Forum – North
February 22, 2006

Bin List & Great Ideas

1. *Special note for website posting:* These are the recorders notes from the Forum, organized by group discussion topics of : Cost Reduction Incentive Proposals (CRIPs), Work Window Restrictions, Bridge Construction Acceleration, and The Human Factor. The Forum also included a Caltrans Management Panel. Only brief notes were recorded of questions asked during this session. Several documents are posted separately from these notes, including: The Forum “Agenda”, Powerpoint presentations, and a combined action item list from both the northern and southern Forums.
1. Any questions or comments on the 2006 California Bridge Construction Forums may be emailed to: Dolores_Valls@dot.ca.gov

Upshot

These are the verbal assignments made at the meeting. See the separately posted “2006 California Bridge Construction Forum Action Item list” for details.

Ref. #	Who	What	When
1	Dolores	Take the message back to the district directors that they need to provide funds to co-locate the structure reps with the rest of the project construction office.	See separate Action List.
2	Dolores	Make a case for a spec to provide engineering facility at project site so district and structure staff are co-located with contractor's project staff.	Take issue to Pieplow.
3	Bob P	Discuss the need for the CE's to empower the RE's at the next Construction Deputy meeting.	5/10/06
4	Dolores	Have all ACMs take back the message about partnering - - In jobs that have partnering, the use of VA as a tool for CRIPs should be on the agenda. Facilitator should be familiar with it – sell it as a good tool.	Presented 4/27/06
5	Bob P	Revise the field guide to partnering to include stressing the use of the VA meeting as a tool for CRIPs evaluations.	12/31/06
6	Dolores	Improve the constructability review process – Investigate how other segments of the design industry and construction industry conduct constructability reviews.	7/1/06
7	METS	Need to find ways to attract suppliers.	12/31/06

Critique from this meeting:

What went well	What Needs Improvement
1.	1.

1. “Cost Reduction Incentive Proposals” Discussion

1. 1. Good ideas not accepted – communication from Caltrans was not rapid – maybe it was rejected for good reason, but timely response to us is important.
1. 2. Do Construction Bridge Reps get a “gold star” for successful CRIP? Need to provide incentive. Not much incentive for them to be part of the process.
1. 3. Savings – What is the value of time saved? Taking less R/W, etc. many areas where we could look at all the savings from CRIP.
1. 4. Partnering chemistry is important, and we generally don’t have that in the CRIP. Caltrans process does not encourage the right kind of chemistry later on... people too busy. Should be encouraging CRIP early on in the partnering session, at the front end of the job. It takes both parties... It needs synergy from all of us.
1. 5. Designer of record should accept that there are many ways to do things, and be more open minded...
1. 6. Budget for original designer to review anything is usually non-existent. Need to have \$\$ in the budget for this. With third party very frequently there is no budget for these ideas to be reviewed.
1. 7. Empowerment of Structure Rep to be an engineer on site – is that still there or is the structure rep just shuffling paper off to others.
1. 8. 90% of the CRIP is selling the idea. If you can’t sell the idea to the designer you cant implement. Approach the designer with “Good design, here is how we might improve it...” etc. Use diplomatic approach.
1. 9. CRIP – Contractor has to go through all the engineering, etc. Real value is in partnership working out the details, but often when this happens, the collaboration results in the contractor losing the ownership of the idea.
1. 10. Construction Change Orders vs. CRIP - VA study process addresses this – There is a vehicle set up to jointly address an idea without taking ownership away from the contractor.
1. 11. Caltrans process is very difficult. Process is time consuming and onerous. Providing contract documents for the state to say “Yes” or “No” is difficult for contractor/engineer to do. It is difficult to get to the top quickly in Caltrans with your idea.
1. 12. Need to take a look at the CRIP spec – We have to come in with a full package. Not realistic. We need to be able to hand it off to someone who will present an idea to the yes-no person.
1. 13. Third party (or Caltrans) designer has no incentive to get behind the idea.
1. 14. Attitude at CT seems to be “CRIPS are BAD.”
1. 15. If the answer is NO, we need to have the reason. What is the Fatal Flaw?

1. 16. CRIPS are more of an iterative process, which is a time burner, and can cause the CRIP to die. Need to streamline and collaborate.
1. 17. Need to provide help to the CRIP suggestor in preparing the documents.
1. 18. Need "Go-No GO" right away on the ideas.
1. 19. CT Design phase is so long and market changes so fast CT cannot keep up with changing assumptions.
1. 20. CT bickers too much about true cost. The value to innovation and new ideas is not recognized by Caltrans in practice.
1. 21. Cost splits – who has the risk on the CRIP? The risk sharing should go along with the reward sharing.
1. 22. Keep the cost local at the project level.

2. Work Window Restrictions

2. 1. Break foundation work out from the rest of the project – get it going sooner.
2. 2. Recognize funding and release of the contracting has nothing to do with the work windows, but it seems like between submittals and bid release, no one is looking at managing the work windows. Some can be managed. Look at which job is going out when. Consider the timing of releasing the job for work as it relates to windows.
2. 3. Negotiate the work windows/permits with regulatory agencies using the contractors as part of the team. Get the contractor input. Some work windows are very expensive. Get contractor help. Guys getting the permits don't build anything – they need input from Structures Construction
2. 4. Get contractors involved in the design process earlier.
2. 5. Consider the economic impact of the fine against the lost amount of construction money. Deal with the economic realities. Negotiate this.
2. 6. Economic side – traffic – lane closure requirements are very stringent, yet CT Mtce seems to be oblivious to the issue. Is CT considering lane rental?
2. 7. We don't get treated the same as CT Mtce.
2. 8. Language written into the permits is problematic – Restrictions we don't know about --- "I meant this...." Permits are written in "environmental speak," and biological opinions and is not easily understood by builder.
2. 9. No leniency in permit interpretation. There should be some more reasonableness, not cut and dried, black and white. RE needs flexibility.
2. 10. Political pressure is beyond reasonable. Give us more flexibility – Educate the public on the benefits of flexible approach... part of the partnering process. "Hey, lets go another fifteen minutes, because it makes more sense." Caltrans response: Credibility damaged by running later than window allows = decreased flexibility.
2. 11. Railroad – too often there is not any useful guidance. Need to get more specific on design criteria. Let us know more information – how many trains, etc... Need to have more details. Caltrans does a poor job with this.
2. 12. Need to tell the advantages of extra windows. Need to sell this. Public outreach is important. "Brute Force" – go in, get it done, get out. Need to look at reward/penalty.

- 2. 13. Cost of work window requirements is not shared with the environmental people. There should be a way to charge them for part of the cost.
- 2. 14. Caltrans environmental people have their own agenda, and construction needs to live with it...
- 2. 15. Lane closures – RE and Structure Rep needs to know the work... There needs to be more sanity and flexibility exercised to allow the work to get done.
- 2. 16. If there is a legitimate accident, the penalties should not apply.
- 2. 17. Need to have permits agencies involved with contractors.
- 2. 18. Need to have the person who puts the spec together be involved – the Project Manager needs to be involved.
- 2. 19. Special provisions – don't direct the contractor to specific issues which will affect construction. The special provisions are vague. Why doesn't CT take the risk to put it in clear, plain language so we know what we are facing?
- 2. 20. The order of work ought to reflect the permit.
- 2. 21. We need more face-to-face with the permitting agencies.

3. Bridge Construction Acceleration

- 3. 1. CT question: Why don't we do more pre-cast in California? Contractor response: Span width. Aesthetics.
- 3. 2. Cure time – no way to change it...
- 3. 3. Get a copy of the FHWA report on bridge construction acceleration 2002.
- 3. 4. Self-compacting concrete – need to use it
- 3. 5. Start earlier -
Check out the Caltrans mandated activities. Caltrans is in control of the majority of the pace of the project.
- 3. 6. Never allow a submittal to be on the critical path of the job.
- 3. 7. Rolling four-tens requires overtime for Sat-Sunday. We need - on four days, off four days - rolling four days. It is more expensive in California. We could pick up significant time.
- 3. 8. When I work four tens, I should be given credit for five working days on review of my submittal.
- 3. 9. Submittal time – drives the schedule.
- 3. 10. Sustained overtime depresses productivity and increases accidents.
- 3. 11. Submittals are often rejected without comments. We need more information, more help. This can help out the process. We have gotten away from helpful rejection letters...
- 3. 12. Submittal time frames are in working days, other day counts are calendar days. Re-submittals take more time.
- 3. 13. re-staging or detouring projects to eliminate staging can save a lot of time.

- 3. 14. Mix designs – why does it take fifteen days for approval?
- 3. 15. Approve submittals so we can get the work started – many of the comments are very minor. We can fix the detail later.
- 3. 16. Need more staffing on the review side. –
- 3. 17. Question to CT- does CT look at the submittal times when looking at the duration of the contract? When they look at contract time, how often do they look at submittal times?
- 3. 18. Submittal review time doesn't start until after the "pre-comment period"
- 3. 19. Other owners are more pro-active. We get contacted immediately upon award by the RE. Caltrans does not do this...
- 3. 20. Partnering process – if you start the process on a fast track job and point out how critical the review times are, get someone to track the progress on submittals you can get things done faster. Everyone needs to commit up front to getting the submittals out ASAP, not just within the limits. Go back to partnership – you cannot accelerate bridge construction unless all people involved realize that time is important. Everyone needs to see the reason for doing this. Need buy-in. Need the right people involved in the discussion.
- 3. 21. Information sharing – getting the information from the contractor – share all the CADD files up front, don't make the contractor wait in line to get this information.
- 3. 22. Technology – Caltrans should be using parallel e-mails to notify approvals of submittals.
- 3. 23. Submittals – Provide copies of the submittals to the design reviewer, try to help the designer get a jump start on the review.
- 3. 24. "No" can never be the answer. If "no" is the answer you should have the CT person elevate the issue.
- 3. 25. Other owners do two notices; one for submittals prior to award, and one for construction when the working days start.
- 3. 26. Don't even think about acceleration – think about not stopping... Try not to decelerate.
- 3. 27. Spend more up front money identifying and relocating utilities.
- 3. 28. Accelerate utilities.
- 3. 29. More cash...
- 3. 30. Put pressure on PG&E and other utilities. We have big windows for them to do their work. They need to get done sooner.
- 3. 31. We want to get done in a shorter period of time, not "sooner." Get all the ducks in a row before you start, then "get in, get out." Brute force approach.
- 3. 32. We need more room to build and we will build faster. This should start at the very beginning of design.
- 3. 33.

4. The Human Factor” - Working with the people - personalities
 4. 1. Compatibility – people need to get along with each other to get the work done best. Personalities matter.
 4. 2. Cultural diversity of CT staff introduces complex aspects to relationships.
 4. 3. Communicate that we are all moving in the same direction – we can get around languages. We need to understand that we share the same objective.
 4. 4. There is a disconnect between the top management and field personnel in CT – The managers want to work together; this is not always shared by the people in the field.
 4. 5. CT person should be accountable when he or she is wrong.
 4. 6. Personality clashes are minority of the time. In general we get along and get the jobs done.
 4. 7. Working with the people is separate from finding people to do the work. Caltrans needs to empower, train, trust their employees and reduce bureaucracy.
 4. 8. The CE’s micromanage the RE’s.
 4. 9. We need to get a higher trust level back into the work.
 4. 10. E-mail may be over-involving people - no one wants to step on anyone else’s toes.
 4. 11. Face-to-face communication is best. Co-locating offices is best. Face time matters.
 4. 12. Rent the trailers –keep the people together on the job site. Put them closer together.
 4. 13. Caltrans and industry need to consciously put teams together – co-locate them. Putting people together in the same space you build relationships.
 4. 14. Caltrans should do informal brown bag lunch discussions about issues with contractors, help the staff.
5. The Human Factor- finding people to do the work - Experience/Labor Shortage
 5. 1. We have to get into the schools to recruit. We as an industry need to recruit in the schools –
 5. 2. This will be a long process – It took several years to get into this, and it will take us years to get out of the shortage.
 5. 3. Recruit among veterans.
 5. 4. Structure Reps who are empowered in the field are most effective. Bridge reps who share their experience with us are most effective.
 5. 5. Rotation program will start up in May – Use the recruiting program as a selling point. Stress that recruits will be eligible for their PE as soon as possible.
 5. 6. CT needs to recruit engineers with the expectation expressed that the new hires will travel.
 5. 7. CT Bridge Academy and training program used to be second to none.
 5. 8. Mentoring program is good.

Management Panel: See separate document for Bios of all Panel Members.

Each Caltrans Management Panel Member provided an opening statement.

Bob Pieplow – The Division of Construction is actively involved in the Governor's GoCalifornia effort. There are approximately 100 action items from meetings with Industry. Some of the feedback from Industry include a wide spread lack of understanding of all Resident Engineers on "cash flow" of Contractors. There is also concern on the aggregate sources available for Caltrans projects.

Mark Leja – The Division of Design is taking a hard look at the Departments process for cost estimating (Engineers Estimates). Past practice includes the use of historical bid pricing. The Department experienced the perfect storm in July and August of 2005 when over \$1 billion worth of contracts were scheduled for advertisement.

Jay Norvell – The Division of Environmental Analysis is reviewing processes on obtaining permits for work windows. The Department has Environmental Liaisons in each District. They are working with Designers on material sites and listed species concerns.

Bob Buckley – The Division of Engineering Services typically open bids on approximately 25 projects per week. Lately due to fiscal constraints, the average has been 7 to 8 projects. He is interested in hearing more from the Contracting Industry on project acceleration, and will work with Department staff on the submittal approval process discussed earlier.

Some Questions (and answers) from the floor that were recorded:

Q: Is there coordination of bids between Districts? It appears there are large bridge construction projects advertised at the same time. A: The Department does have a Scheduling Unit.

Q: What is the Department doing to attract more suppliers? A: The Department is looking at our Quality Control procedures.

Q: What is the Department doing to make us customer of choice? Why the higher quality standard?

A: The Department is trying to benchmark with Industry. We are building bridges that are expected to serve the public for 75 years, according to new bridge design standards. We are continually looking at our process and procedures.

Q: Is the Department looking at standard testing procedures? A: The Department uses both ASTM and California Test Methods (CTM). All test methods are published.

Q: Is the Department looking at "incidental take" for swallows and other migratory birds that are not on the endangered list? A: No. Best to place nets prior to nesting season.

Q: Why isn't SWPPP a line item? A: AGC has task force currently looking at bid items for Storm Water Pollution Protection items of work.

Q: Is the Department concerned that there is only one Overhead Sign manufacturer that is out of Utah? A: METS has recently completed an audit of another manufacturer that will be available for Caltrans projects.